CLAIMS

What is claimed is:

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1. A shroud system for a wind turbine comprising:
   a. a central hub;
   b. a first connecting structure having a root portion and a tip portion, wherein said root portion is attached to the hub;
   c. a shroud having an internal surface and an external surface, wherein the internal surface is attached to the tips of the connecting structure;
   d. a second set of connecting structure having a root portion and a tip portion, wherein said root portion is attached in such a manner as to extend beyond the external surface of the shroud.

2. The shroud system of claim 1, wherein the connecting structure comprises blades.

3. The shroud system of claim 2, wherein the second set of blades is attached directly to the external surface of the shroud when the blades are fixed pitch.

4. The shroud system of claim 2, further including a plurality of rotatable drive shafts extending radially outward from the external surface of the shroud in one-to-one correspondence with the second set of blades for supporting each blade in variable pitch configuration.

5. The shroud system of claim 2, wherein the second set of blades are of variable pitch.

6. The shroud system of claim 1, further comprising:
   a. a plurality of rotatable mounting posts in one-to-one relationship with the second set of blades and extending radially outward from the shroud for supporting each of the second set of blades; and

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b. a control motor for driving each post and controlling the angular position thereof for determining the pitch of the second set of blades.

7. The shroud system of claim 6, wherein each mounting post extends through the shroud and to the hub.

8. The shroud system of claim 7, wherein the control motor is mounted within the hub.

9. The shroud system of claim 7, wherein the mounting post is carried within a corresponding of the first set of blades.

10. The shroud system of claim 9, wherein the first set of blades is mounted in a fixed relationship with the shroud for providing a fixed pitch blade.

11. The shroud system of claim 2, wherein the first set of blades is mounted in a fixed relationship with the mounting post for providing a variable pitch blade.

12. The shroud system of claim 1, wherein said shroud includes a ring gear for driving at least one generator.

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13. The shroud system of claim 12, wherein the ring gear is on the internal surface of the shroud.

14. The shroud system of claim 1, wherein the shroud is a circular ring.

15. The shroud system of claim 1, wherein the shroud is a polygonal shape.

16. A wind turbine comprising:

a. a tower;

b. a nacelle mounted on said tower;

c. a hub mounted for rotation on a shaft supported within the nacelle;

d. a plurality of first rotor blades, said blades having a root end and a tip end, wherein the first rotor blades or structures are attached at said root end to a hub and said hub being secured to said shaft extending from the nacelle;

e. a shroud having an internal surface and an external surface, wherein the internal surface of the shroud is attached to the tip ends of said first rotor blades or structures;

f. a plurality of second rotor blades, said blades having a root end and a tip end, wherein the root ends of the second rotor blades are attached to the external surface of the shroud if fixed pitch or to a drive shaft if variable pitch.

17. The wind turbine of claim 16, further comprising:

a. a strut or struts secured to the nacelle and extending radially outward from the nacelle;

b. a generator mounted on the strut and in alignment with the shroud;

c. a ring gear on the shroud; and

d. a driven gear on the generator and in engagement with the ring gear on the shroud.

18. A wind turbine comprising:

a. a tower;

b. a nacelle having a support strut extending therefrom, said nacelle being mounted on said tower;

c. the nacelle further including a support shaft extending therefrom;

d. a generator incorporating a gear and being mounted on said support strut;

e. plurality of first rotor structures having a root end and a tip end,

wherein the first rotor structures are attached at said root end to a hub and said hub being secured to said shaft extending from the nacelle;

f. a shroud having an internal surface and an external surface, wherein the internal surface of the shroud is attached to the tip ends of said first fixed pitch rotor structure and wherein said shroud further includes a ring gear for interfacing a generator incorporating a gear;

g. a plurality of second rotor structures having a root end and a tip end, wherein the root ends of the second rotor structures are attached to the external surface of the shroud if fixed pitch or a drive shaft if variable pitch.

19. The wind turbine of claim 18, wherein the rotor structures are blades.

20. The wind turbine of claim 18, further including pitch riding retainers for maintaining proper gear alignment between said ring gear and said pinion gear.

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21. The shroud system of claim 8, wherein the ring gear is on the external surface of the shroud.

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